UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,051	04/27/2001	Sev K. H. Keil	B01.002	1476

33893   7590   05/03/2007

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ART UNIT	PAPER NUMBER
3622	

MAIL DATE	DELIVERY MODE
05/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	09/845,051	KEIL ET AL.
	Examiner	Art Unit
	DANIEL LASTRA	3622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02/02/2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-33 and 39-71</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-33 and 39-71</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>02/02/2007</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)　　　　　Office Action Summary　　　　　Part of Paper No./Mail Date 20070416

DETAILED ACTION

1.   Claims 1-33 and 39-71 have been examined. Application 09/845,051 (SYSTEM

TO PROVIDE CONSUMER PREFERENCE INFORMATION) has a filing date

04/27/2001.

Response to Amendment

2.   In response to Non Final Rejection filed 08/01/2006, the Applicant filed a

Request for reconsideration on 02/02/2007.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a
foreign country or in public use or on sale in this country, more than one year
prior to the date of application for patent in the United States.

Claims 1-33, 39-71 are rejected under 35 U.S.C. 102(b) as being anticipated by

Herz (U.S. 6,029,195).

As per claims 1 and 39 Herz teaches:

A computer implemented method for determining preference information,

comprising:

storing preference information for a plurality of consumers, the preference

information relating to an attribute of a product (see col 6, lines 15-67 "target objects

may be purchasable items...attributes can be product description"; col 16, lines 60-67

"target objects are consumer goods and the weight of the color attribute is small");

providing trade-off questions relating to the attribute to a consumer (see column 12, lines 25-38; column 18, lines 10-67; col 28, lines 45-60 "user profiles include an associative attribute that records the user's relevance feedback on all target objects in the system...rapid profiling procedure can rapidly from a rough characterization of a new user's interests by soliciting the user's feedback on small number of significant target objects, and perhaps also by determining a small number of other key attributes of the new user, by on-line queries, telephone surveys or other means");

receiving answers to the trade-off questions from the consumer (see column 18, lines 10-30; col 28, lines 40-67);

determining, based on the answers, preference information associated with the consumer (see column 6, lines 16-59; col 28, lines 40-67);

validating the preference information of the consumer (see col 7, lines 1-17; column 30, line 46 – column 31, line 10). Applicant's specification defines "validating" as "predicting precision of the preference information"[1]. Herz estimates each user's interest in various target objects and generates for each user a customized rank-ordered listing of target objects most likely to be of interest to the user[2]; and

mixing, using a computing device, based upon the validating, the preference information of the consumer with the preference information of the plurality of consumers (see column 7, line 19 – column 8, line 47; column 12, lines 25-35),

wherein a degree to which the preference information associated with the consumer is mixed with the preference information associated with the plurality of

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[1] Applicant's specification page 9, lines 4-12

consumers is different than a second degree to which second preference information associated with a second consumer is mixed with preference information of a second plurality of consumers (see column 16, line 52 – column 17, line 57; col 19, lines 7-67; column 21, line 5 – column 22, line 29; col 24, line 60 – col 25, line 60; column 29, lines 1-35).

As per claims 22 and 60, Herz teaches:

A computer implemented method for determining preference information, comprising:

storing preference information regarding a plurality of consumers, the preference information relating to an attribute of a product (see col 6, lines 15-67 "target objects may be purchasable items...attributes can be product description"; col 16, lines 60-67 "target objects are consumer goods and the weight of the color attribute is small");

providing trade-off questions relating to the attribute to a consumer (see column 12, lines 25-38; column 18, lines 10-67; col 28, lines 45-60 "user profiles include an associative attribute that records the user's relevance feedback on all target objects in the system...rapid profiling procedure can rapidly from a rough characterization of a new user's interests by soliciting the user's feedback on small number of significant target objects, and perhaps also by determining a small number of other key attributes of the new user, by on-line queries, telephone surveys or other means");

receiving answers to the trade-off questions from the consumer (see column 18, lines 10-30; col 28, lines 40-67);

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[2] Herz col 7, lines 1-20

determining, using the answers, preference information associated with the consumer (see column 6, lines 16-59; col 28, lines 40-67);

validating the preference information (see col 7, lines 1-17; column 30, line 46 – column 31, line 10). Applicant's specification defines "validating" as "predicting precision of the preference information"[3]. Herz estimates each user's interest in various target objects and generates for each user a customized rank-ordered listing of target objects most likely to be of interest to the user[4]; and

mixing using a computing device the preference information with preference information associated with the plurality of consumers based on the validating step (see column 16, line 52 – column 17, line 57; col 19, lines 7-67; column 21, line 5 – column 22, line 29; col 24, line 60 – col 25, line 60; column 29, lines 1-35).

As per claims 31 and 69 Herz teaches:

A computer-implemented method to produce consumer preference information, comprising:

storing preference information for a plurality of consumers, the preference information relating to an attribute of a product (see col 6, lines 15-67 "target objects may be purchasable items...attributes can be product description"; col 16, lines 60-67 "target objects are consumer goods and the weight of the color attribute is small");

providing trade-off questions relating to the attribute to a consumer (see column 12, lines 25-38; column 18, lines 10-67; col 28, lines 45-60 "user profiles include an associative attribute that records the user's relevance feedback on all target objects in

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[3] Applicant's specification page 9, lines 4-12

the system...rapid profiling procedure can rapidly from a rough characterization of a new user's interests by soliciting the user's feedback on small number of significant target objects, and perhaps also by determining a small number of other key attributes of the new user, by on-line queries, telephone surveys or other means");

receiving answers to the trade-off questions from the consumer (see column 18, lines 10-30; col 28, lines 40-67);

determining, based on the answers, consumer preference information associated with the consumer (see column 6, lines 16-59; col 28, lines 40-67);

currency-normalizing, using a computing device, the consumer preference information (see col 15, lines 35-55; col 16, lines 55-60; col 19, lines 29-60 "likelihood interest").. and

mixing, using a computing device, the currency-normalized consumer preference information with the preference information of the plurality of consumers (see col 19, lines 7-67; col 21, lines 25-35; col 23, line 40 – col 24, line 10; col 67, lines 1-30).

As per claims 2 and 40, Herz teaches:

A method according to Claim 1, wherein the preference information associated with the consumer and the preference information associated with the plurality of other consumers comprise normalized part worth values (see column 19, lines 50-60 "weight of each attribute indicative of users' preference for those target object that have high values for this attributes").

As per claims 3, 41 Herz teaches:

A method according to Claim 2, wherein the preference information associated with the consumer and the preference information associated with the plurality of other consumers comprise currency-normalized part worth values (see col 19, lines 7-67 "normative property"; column 65, line 50 – column 66, line 61).

As per claims 4, 27, 42 and 65, Herz teaches:

A method according to Claim 1, further comprising:

selecting the plurality of consumers from a group of past consumers based on attribute levels identified as unacceptable by each consumer of the group of past consumers (see column 21, lines 35-67).

As per claims 5, 28, 43 and 66 Herz teaches:

A method according to Claim 4, wherein the selected plurality of consumers are members of the group of past consumers who identified similar attribute levels as unacceptable (see column 21, lines 35-67).

As per claims 6, 29, 44 and 67, Herz teaches:

A method according to Claim 1, further comprising:

selecting the plurality of consumers from a group of past consumers based on part worth values associated with each consumer of the group of past consumers (see column 19, lines 30-67; col 21, lines 5-35).

As per claims 7, 30, 45 and 68, Herz teaches:

A method according to Claim 6, wherein the selected plurality of consumers are members of the group of past consumers who are associated with similar preference information (see column 6, lines 17-59).

As per claims 8, 46, <u>Herz</u> teaches:

A method according to Claim 1, wherein mixing the preference information comprises:

normalizing the preference information (see column col 19, lines 7-67; col 15, lines 35-67);

determining consumer subgroups (see column 89, lines 25-50);

assigning the consumer to one of the consumer subgroups (see column 89, lines 25-67); and

mixing preference information associated with the one of the consumer subgroups with the preference information associated with the consumer (see column 87, lines –5-40).

As per claims 9, 47, <u>Herz</u> teaches:

A method according to Claim 8, wherein determining consumer subgroups comprises:

assigning past consumers to subgroups based on attribute levels that the past consumers indicated as unacceptable (see column 21, lines 35-67).

As per claims 10, 48, <u>Herz</u> teaches:

A method according to Claim 8, wherein determining consumer subgroups comprises:

assigning past consumers to subgroups based on part worth values associated with the past consumers (see column 5, line 30 – column 6, line 30; col 19, lines 50-60).

As per claims 11, 23, 24, 49, 61 and 62 <u>Herz</u> teaches:

A method according to Claim 1, wherein validating the preference information comprises:

predicting consumer answers to the trade-off questions based on the preference information associated with the consumer (see column 7, lines 5-17; col 19, lines 9-27; col 28, lines 45-60); and

predicting subgroup answers to the trade-off questions based on the preference information associated with the plurality of consumers (see column 19, lines 8-67),

wherein the preference information is mixed with the preference information associated with the plurality of consumers based on the actual answers, the predicted consumer answers and the predicted subgroup answers (see column 23, line 60 – column 24, line 40; col 28, lines 40-67).

As per claims 12, 25, 26, 50, 63 and 64 Herz teaches:

A method according to Claim 11, further comprising:

determining a mixing parameter based on the answers, the predicted consumer answers and the predicted subgroup answers, wherein the preference information is mixed with the preference information associated with the plurality of consumers based on the mixing parameter (see column 23, line 60 – column 24, line 40; col 28, lines 40-67).

As per claims 13, 51, Herz teaches:

A method according to Claim 1, further comprising:

determining an offer to sell a product based on the mixed preference information (see column 23, line 60 – column 24, line 40).

As per claims 14, 33, 52 and 71, <u>Herz</u> teaches:

A method according to Claim 13, further comprising:

providing the offer to the consumer (see column 9, line 55-67).

As per claims 15, 53, <u>Herz</u> teaches:

A method according to Claim 1, wherein the first plurality of consumers is identical to the second plurality of consumers (see column 23, line 60 – column 24, line 40).

As per claims 16, 54, <u>Herz</u> teaches:

A method according to Claim 1, wherein the first plurality of consumers does not include any consumers belonging to the second plurality of consumers (see column 7, line 50 – column 8, line 47).

As per claims 17, 55, <u>Herz</u> teaches:

A method according to Claim 1, wherein one or more of the first plurality of consumers are members of the second plurality of consumers (see column 7, line 50 – column 8, line 47).

As per claims 18, 56, <u>Herz</u> teaches:

A method according to Claim 1, wherein the plurality of consumers comprises all past consumers for whom preference information is stored (see column 17, lines 1-10).

As per claims 19, 57, <u>Herz</u> teaches:

A method according to Claim 1, wherein the plurality of consumers comprises a predetermined number of past consumers for whom preference information is stored (see column 17, lines 1-56).

As per claims 20, 58, Herz teaches:

A method according to Claim 19, wherein the predetermined number of past consumers are determined based on a time at which preference information associated with each of the predetermined number of consumers was collected (see column 18, lines 10-67).

As per claims 21, 59, Herz teaches:

A method according to Claim 1, wherein the plurality of consumers comprises all past consumers for whom preference information was collected during a particular time period (see column 18, lines 9-67).

As per claims 32 and 70, Herz teaches:

A method according to claim 31, further comprising: providing an offer based on the currency-normalized information (see column 29, lines 1-35).

Response to Arguments

4.   Applicant's arguments filed 02/02/2007 have been fully considered but they are not persuasive. The Applicant argues that in contrast to Herz, the Applicant's claimed invention generates and process consumer preference information relating to attributes of products and is not matching system. The Examiner answers that Applicant's claimed invention recites "storing preference information for a plurality of consumers, the preference information relating to an attribute of a product; providing trade-off questions relating to the attribute to a consumer; receiving answers to the trade-off questions from the consumer; determining, based on the answers, preference information associated with the consumer". Herz teaches "For example, when user profiles include an

associative attribute that records the user's relevance feedback on all target objects in the system, the rapid profiling procedure can rapidly form a rough characterization of a new user's interests by soliciting the user's feedback on a small number of significant target objects, and perhaps also by determining a small number of other key attributes of the new user, by on-line queries, telephone surveys, or other means" (see col 28, lines 47-60). Therefore, contrary to Applicant's argument, Herz provide consumers with trade-off questions related to attribute of products in order to determine preference information associated with said consumers.

The Applicant argues that Herz does not show or suggest the claimed steps of providing to a consumer trade-off questions relating to an attribute and receiving back the answers. The Examiner answers that Herz teaches "In a variation, each user's user profile is subdivided into a set of long-term attributes, such as demographic characteristics, and a set of short-term attributes that help to identify the user's temporary desires and emotional state, such as the user's textual or multiple-choice answers to questions whose answers reflect the user's mood. A subset of the user's long-term attributes are determined when the user first registers with the system, through the use of a rapid profiling tree of long-term attributes. In addition, each time the user logs on to the system, a subset of the user's short-term attributes are additionally determined, through the use of a separate rapid profiling tree that asks about short-term attributes" (see col 28, lines 55-67). Therefore, contrary to Applicant's argument, Herz teaches providing to a consumer trade-off questions relating to an attribute and receiving back the answers.

The Applicant argues that <u>Herz</u> does not teach the validating step. The Examiner answers that <u>Herz</u> teaches "The most relevant attributes which both products share are presented using these rapid profiling techniques. In order to develop a truly robust statistically confident comparison across all products on an attribute by attribute basis, it is important to use this comparative product rating approach, to identify automatically which product comparisons are most statistically relevant in order to provide statistical confidence for all products being evaluated (in this comparative product context) to validation of the values of each attribute using different combinations of product comparisons is important in order to assure statistical confidence (between different users)...Individuals may be automatically presented with targeted questions appropriate to the nature thereof in accordance with their mutual relationship through anticipation of which attributes or queries other individuals (like friends, associates, business partners or employers) are most likely to request in the future. These questions are ideally requested from multiple users, their values are then averaged and may be ascribed to that user as resolution credentials. In case of disputes mediation by a judicating third party may be required. Additionally, the system may further anticipate the types of questions which are most likely to be requested by other users in the future. This approach may also be used by the system to profile skills sets, qualifications, issues of personality, character or qualification to perform a particular task. It may also direct queries to the users most likely to be qualified knowledgeable in certain popular domains, which are most likely to be relevant (and thus anticipate the types of queries that other users are likely to request. Similarly, users may be used to answer questions

or provide descriptive characterizations of certain tasks or queries using rapid profiling

in this way as well" (see col 30, lines 25-67). Therefore, contrary to Applicant's

argument, Herz presents a system that validates (i.e. predict precision) of questions and

answers made by user related to products attributes.

The Applicant argues that Herz does not show the claim 39 recitation of

"currency normalizing" the consumer preference information. The Examiner answers

that claim 39 does not recite "currency normalizing" the preference information.

The Applicant argues that Herz does not teach mixing the preference information

based upon the validating. The Examiner answers that Herz teaches clustering (i.e.

grouping or mixing) users' profiles based on the similarity of the target objects they like,

where a useful quality attribute for a target object X is the average amount of residue

feedback from users of that target object, averaged over all users who have provided

relevance feedback on the target object (see col 23, lines 40-45). Therefore, contrary to

Applicant's argument, Herz predicts a user's interest based upon known interests of

other users with similar profiles (see col 28, lines 50-65) and after validating or obtaining

relevance feedback information.

The Applicant argues that Herz does not teach wherein the degree of mixing

individual and group preference information is different for different consumers. The

Examiner answers that Herz teaches clustering (i.e. grouping or mixing) target profiles

into different clusters (see col 25, lines 10-65) in order to predict a user' preference

based upon the clustering or group profile. Therefore, contrary to Applicant's argument,

<u>Herz</u> teaches that individual and group preference information is different for different consumers, as each consumer can be group in a different cluster.

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL LASTRA whose telephone number is 571-272-6720 and fax 571-273-6720. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ERIC W. STAMBER can be reached on 571-272-6724. The official Fax number is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Lastra
April 21, 2007

RETTA YEHDEGA
PRIMARY EXAMINER